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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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John Kevin McCoy

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EXAMINER

TSOY, ELENA

ART UNIT

PAPER NUMBER

1792

MAIL DATE

DELIVERY MODE

07/16/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### ***Advisory Action***

The amendment filed on July 10, 2008 under 37 CFR 1.116 in reply to the final rejection has been considered but is not deemed to place the application in condition for allowance and will not be entered because: the proposed amendment raises new issues, such as “*wherein the fired arrangement has a higher thermal conductivity than the arrangement without infiltration of the uranium dioxide with the precursor liquid*”, that would require further search and consideration since they were not searched and addressed in the Final Office Action mailed on 5/12/2008.

### ***Specification***

The proposed amendment to the specification “an increase in the thermal conductivity of 50 percent” will not be entered because it introduces new matter into the disclosure. 35 U.S.C. 132(a) states that no amendment shall introduce new matter into the disclosure of the invention.

### ***Response to Arguments***

Applicant's arguments filed July 10, 2008 have been fully considered but they are not persuasive.

#### **As to proposed amendment not introducing new issues,**

Applicants submit that the amendment to the independent claim add recitations that elaborate on the structure of the presently claimed invention, and, thus, do not affect the scope of the claims. The amendments only further clarify the claimed invention.

The Examiner respectfully disagrees with this argument. In contrast to Applicants argument, the amendment would change the scope of claimed invention because the thermal conductivity of the fired arrangement of claim 1 (before the amendment) would not be necessarily higher since it depends on particular precursor liquid. Note that silicon carbide (that

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according to the specification increases the thermal conductivity of the fired arrangement) is not recited by claim 1. Therefore, the amendment introduces new issues.

As to rejection under 35 U.S.C. § 112, first paragraph,

Applicants submit that the specification, as originally filed, in the paragraph bridging pages 5 and 6, disclosed

Use of silicon carbide is compatible with existing light-water reactors, thermally, chemically and neutronically. New reactor systems, therefore, do not have to be created in order to utilize a fuel containing silicon carbide. The thermal conductivity of silicon carbide is high so that substantial increases in overall fuel thermal conductivity can be achieved with only a small decrease in the density of uranium atoms. As an example, a thermal conductivity of 50 percent is expected for a 10 percent volume loading of silicon carbide”.

As will be understood by those skilled in the art, that paragraph of the specification, as filed, is directed to increases in overall fuel thermal conductivity. It would also be understood by those skilled in the art, that the units for thermal conductivity are not percent. Instead, percent is the unit used for a change in thermal conductivity.

The Examiner respectfully disagrees with this argument. First of all, the above citation refers to the *silicon carbide* as a second phase. However, *neither* claim 1 *nor* claim 11 recites silicon carbide as the second phase. Second, in contrast to Applicants argument, it may be understood by those skilled in the art, that the thermal conductivity in claim 11 constitutes 50 percent of the thermal conductivity of known conductive materials, e.g. that of a metal.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elena Tsoy Lightfoot whose telephone number is 571-272-1429. The examiner can normally be reached on Monday-Friday, 9:00AM - 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Meeks can be reached on 571-272-1423. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

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Elena Tsoy-Lightfoot, Ph.D.  
Primary Examiner  
Art Unit 1792

July 15, 2008

/Elena Tsoy Lightfoot/

Primary Examiner, Art Unit 1792